delayed transactions, and/or incorrect billing. Such impacts will delay or prevent a CLEC from acquiring and serving customers.

36. Recognizing these realities, the Commission has stated that a BOC can meet its OSS obligations only if it is "adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them".[11] However, SWBT has failed to provide critical resources to CLECs in Texas in at least the following major respects. First, it has failed to implement any "versioning" capability, which would enable CLECs to avoid the potentially catastrophic consequences of an unsuccessful "flash cut" from one version of SWBT OSS software to the next version. Second, SWBT has, on several occasions, simply disregarded the change management process altogether by making unannounced changes to its OSS (most recently, by unilaterally changing the billing records it provides to AT&T in such a way as to cause AT&T's systems -- for roughly two months -- to bill certain customers making local, direct dial calls at operator handled rates). Third, SWBT has, to date, consistently failed to adhere to any established set of change management procedures in connection with any significant change to its OSS. Fourth, SWBT has failed to provide CLECs with a production-like test environment for testing prospective OSS changes, thereby making it impossible for CLECs to adequately test changes in advance and exacerbating the problems associated with SWBT's lack of versioning and its chronic inability to adhere to established change management procedures. Finally, SWBT fails to publish comprehensive, baselined documentation describing its deviations from

[11] Application of BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in Louisiana, CC Docket No. 98-121, Memorandum Opinion and Order, 13 FCC Rcd 20599 ¶ 85 (1998) (BellSouth-Louisiana II Order) ¶ 85; BellSouth-South Carolina Order, ¶ 96; Ameritech-Michigan Order ¶ 136.

EDI interface industry standards (thus, leaving CLECs to "guess" at certain of SWBT's unpublished mapping rules as they seek to implement their side of the EDI interface).

A. SWBT Has Failed To Implement Versioning.

1. The Importance of "Versioning".

37. "Versioning" refers to the ability (in this case, on SWBT's part) to simultaneously support two or more releases of a given software package. Versioning to accommodate new software releases is standard in the telecommunications and other industries where the achievement and maintenance of interoperability between companies is critical and depends on the smooth introduction of new software releases.[12] When the systems of two companies must be interoperable, one company's "upgrade" can quickly become another company's disaster, unless both sides of the two companies' electronic interfaces are prepared for the change. Versioning offers flexibility and safety by allowing Company A to go forward with its upgrade, while leaving Company B free to make the transition to the new release smoothly. In the context of local telecommunications competition, such flexibility may be needed to enable a CLEC to delay its transition to a new software release when testing uncovers defects in that release which the BOC has failed to correct. Alternatively, pre-release testing may expose problems with system coding or methods and procedures that are unique to a particular CLEC and, therefore, prevent that CLEC from transitioning to the new release until those problems are corrected. Indeed, versioning, under some circumstances, may enable a

[12] See Letter, Lawrence E. Strickling, Chief, Common Carrier Bureau, to Nancy E. Lubamersky, US West (9/27/99), at 3 (noting the desirability of BOCs "maintain[ing] a pre-existing version, or versions, of [an] interface (e.g., Electronic Data Interchange) when issuing a new release rather than switching directly from one version to the next.")

CLEC to "skip" a release altogether and catch up when the next release is implemented, a strategy that may be important to smaller CLECs where the development costs associated with a given release are high and the added functionality introduced by the new release is not important to the CLEC.

38. Versioning is essential to enable CLECs to avoid unacceptable risks stemming from a given release, particularly those that impact some CLECs more directly than others. Even a "go/no go" policy, allowing CLECs to call for a vote on delaying a release when pre-release joint testing exposes flaws, does not obviate the need for versioning, because new releases impact different CLECs differently. A defect in a release that will cripple one CLEC's ability to convert and support customers may have little impact on another CLEC, thus creating the possibility that a "go/no go" vote will not delay the release.

39. The opposite of versioning -- the "flash cut" implementation that SWBT currently employs -- offers no flexibility and poses a direct threat to the quality of service that can be delivered to a CLEC's new and existing customers. In a flash cut implementation all record exchanges are governed by the new release as of the effective date of implementation. When a release is introduced through a flash cut implementation, support for the current version is discontinued at the time that support for the new version is activated. Introducing changes in ordering requirements or mapping specifications using a flash cut approach poses a high risk that broadly threatens OSS interoperability.

40. Recognizing these potential problems, the Commission recently commended Bell Atlantic for ensuring "that competing carriers are not forced to test and cut over to a new

industry standard release prematurely" by maintaining "a pre-existing version" after issuing a major new release rather than switching directly from one version to the next.[13]

2. SWBT's Failure to Implement Versioning Capability.

41. Like this Commission, the Texas PUC has recognized the importance of versioning, and, in July 1998, it ordered SWBT to implement versioning by January 15, 2000.[14] It is now clear that SWBT will not meet this deadline. Based on its most recent announcement, SWBT will not implement versioning until late July 2000.[15] While SWBT claims, in its application, to have "committed" to support versioning in EDI,[16] the facts belie SWBT's contention. Notwithstanding the TPUC's July 1998 order requiring SWBT to implement versioning by January 15, 2000, SWBT unilaterally declared that it would not comply with the Commission's order because, it did not have a release planned for that date and because it would not make sense to implement versioning in the absence of a release. SWBT then "committed" to introduce versioning with its first release of 2000, which was expected to be implemented late first quarter of 2000. Although SWBT later announced plans to schedule a January 2000 release – LIDB Phase 1, another release mandated by the TPUC – SWBT maintained that versioning would still be pushed back most likely to a planned April 2000 release. However, in early

[13] Bell Atlantic-New York Order ¶ 110.

[14] TPUC Dkt. No. 19000, Order No. 5 (7/23/98). The PUC gave SWBT 18 months to implement versioning in recognition of the difficulty of the task. (Attachment 2).

[15] TPUC Project No. 16251, Final Minutes from the December 7, 1999 Change Management Process Meeting, filed 12/21/99, pp. 3-4. (SWBT Appendix C, Vol. 142, Tab 2028.) Accessible Letter CLEC500-006, 1/24/00 (announcing implementation of LST Versioning targeted for July 22, 2000). (Attachment 3)

[16] Affidavit of Elizabeth A. Ham, FCC Docket No. 00-4, ¶ 352 (SWBT Appendix A-4, Tab 1). ("Ham Aff.").

December, SWBT reneged on that commitment and moved the date to July 2000, stating that versioning could not be accomplished earlier, due to the complexity of the coding requirements associated with versioning.[17]

42. If and when and in what form versioning will ultimately be implemented is an ever changing story.[18] The rationale originally provided for not complying with the Texas PUC's January 2000 implementation deadline (i.e., that because no release was planned for January, there would be nothing to version) disappeared once the January 2000 LIDB Phase 1 release was announced. SWBT nonetheless maintained that it could not meet the deadline and that the LIDB Phase 1 release did not "count" as the first release of 2000 because it was a "special" release. Later, SWBT argued that versioning should not be introduced concurrent with a "significant" release because implementing versioning alone is a complex undertaking.

43. In the meantime, Texas CLECs still do not have versioning and each release implemented before versioning is rolled out and working properly will continue to expose CLECs and the customers they serve to unreasonable risk. Enhancements currently planned for the April and July releases include address validation on conversion activity, additional block field edits, transfer of call options edits, DSL changes, flow through eligibility for supplemental LSRs sent in response to LASR GUI rejects, and same day due date on due date validation. Additionally, other changes are expected to be introduced in connection with SBC-Ameritech merger conditions on uniform interfaces and requirements. Until versioning is in place, each and

[17] TPUC Project No. 16251, 12/7/99 Change Management Process Meeting Minutes, filed 12/21/99, at 2-3 (SWBT Appendix C, Vol. 142, Tab 2028.)

[18] Accessible Letter CLEC 500-006, 1/24/00 (Attachment 3) (indicating detail will be provided in Initial Requirements in a future Accessible Letter).

every one of these "enhancement candidates" is also a candidate for releasing upstream and downstream havoc for a CLEC in development or production. Thus, the absence of versioning capability creates an unacceptably high risk for Texas CLECs investing vast resources in the technical ability to interface with SWBT.

44. SWBT's failure to provide versioning stands in stark contrast to other BOCs, including Bell Atlantic. Further, SWBT's "commitment" to implement versioning in July 2000 is nothing more than a "paper promise" of the sort that this Commission should find insufficient to support a Section 271 application. Indeed, in light of a track record of unmet commitments and deferred dates – despite a TPUC deadline – this "paper promise" is particularly thin. Moreover, as SWBT has itself emphasized in the past, the implementation of versioning is technically complex, and as discussed below, SWBT has not in the past successfully implemented significant EDI changes.[19]

B. Changes Introduced Outside the Change Management Process.

45. SWBT demonstrates both a consistent pattern of non-compliance with Change Management Procedures on its announced releases, and a willingness to introduce completely unannounced system coding changes. We discuss the latter problem first. CLECs have no ability to defend against or prepare for changes introduced by SWBT without notice. Here, the complaint is not that CMP schedules were not followed, but instead that CLECs have absolutely no advance warning of changes impacting their ability to attract and serve customers.

[19] SWBT has repeatedly emphasized the difficulty of implementing versioning. See, e.g., TPUC Project No. 16251, Change Management Meeting Minutes (7/13/99) filed 08/03/99 at 5 (SWBT Appendix C, Vol. 124, Tab 1755.); TPUC Project No. 16251, 12/7/99 Change Management Meeting Minutes, filed 12/21/99 at 2-3 (SWBT Appendix C, Vol. 142, Tab 2028.)

46. First, in the summer of 1999, AT&T found that it was receiving reject notices in response to orders for toll blocking with customized routing. SWBT's documentation showed that SWBT's OSS would support such orders, and similar orders were transmitted successfully in earlier testing. AT&T learned – upon inquiry – that SWBT had made an unannounced intervening software change that caused the orders to reject.

47. Moreover, last fall, AT&T unexpectedly began to receive reject notices in response to change orders submitted on behalf of customers seeking to make PIC changes. Although AT&T's change orders were completely consistent with SWBT's LSOR guidelines, AT&T learned that its orders were rejecting because SWBT -- without AT&T's knowledge -- had begun to implement coding changes in connection with the (still unscheduled) introduction of EDI version 10, including a new activity type associated with PIC changes. These erroneous reject orders caused by SWBT's failure to follow the CMP resulted in orders being provisioned late.

48. The most recent example of SWBT's making changes outside of the Change Management Process is also the most serious, and serves to demonstrate both the importance of adherence to CMP procedures. On October 27, 1999, SWBT made a unilateral, unannounced change to rate class coding on certain billing records that SWBT provides to AT&T for use in its end user billing.[20] As a result of that change, AT&T -- for roughly a two-month period -- billed its end-user customers for an operator handling surcharge on direct dial calls.

49. AT&T did not discover the problem until it began to receive complaints from customers being billed at incorrect rates. Ultimately, AT&T determined that SWBT --

[20] The details of this change are more fully described in Section D below on billing.

apparently in response to a problem experienced by another CLEC -- had made an unannounced change to the Exchange Message Records ("EMR") records that it provides to AT&T which caused AT&T's systems to incorrectly rate certain messages as "operator assisted" instead of "direct dialed".

50. Although SWBT initially attempted to blame this error on AT&T, SWBT ultimately (on January 11, 2000) acknowledged its error, and, on January 18, 2000, it issued an Accessible Letter reversing the change.[21] While AT&T is still trying to remedy the customer billing problems resulting from this error, several points are clear. First, a large number of AT&T's local customers in Texas have been overbilled as a result of the error. Obviously, this has injured AT&T's customers, and it has injured AT&T's relationship with its customers. Second, AT&T is suffering significant administrative expense and inconvenience in its effort to review and correct two months of end user billing.

51. In a market in which numerous CLECs are relying on SWBT's OSS to offer local service to its customers, it is simply unacceptable for SWBT to make unannounced software changes to its systems. And no change management process, regardless of its written terms, can be effective where material, customer-affecting changes can be unilaterally made outside of that process.

52. SWBT represented that, shortly after problems stemming from its December 19, 1998 EDI/LSR release were identified, procedures were implemented that do not allow

[21] SWBT Accessible Letter, CLEC00-016, "Notification of Changes to Daily Usage Extract". (Attachment 4.) (publishing information on "emergency change" to billing usage record). SWBT has acknowledged that returning to its previous rate class field values would be more "appropriate" based on OBF guidelines. Id.

changes to be made outside of the Change Management.[22] Unfortunately, AT&T's commercial experience shows that these procedures, if implemented, have not been effective and the consequences to AT&T have been serious.

53. Apart from system change announcements, SWBT has also acknowledged its failure to provide appropriate notification of policy changes critical to the operations of competing carriers. For example, SWBT made an unannounced change to its EDI hours of operation -- and later acknowledged that formal communication by Accessible Letter should have been provided.[23] AT&T discovered the change only after gearing its production to include transmission of records outside the unannounced revised schedule of operation, and only after SWBT complained about AT&T's "after hours" submission.

C. SWBT's Failure to Follow Change Management Procedures

54. In assessing Bell Atlantic's change management practices, the Commission commented favorably that Bell Atlantic had "established a pattern of compliance with the relevant notification and documentation intervals in its change agreement", and concluded that – despite Bell Atlantic's failure to meet certain performance metrics established by the New York PSC for timeliness notification and documentation -- Bell Atlantic's "overall performance" was sufficient to allow an efficient competitor an opportunity to compete.[24]

55. By way of contrast, SWBT – over the last year – has established a very strong pattern of non-compliance with respect to applicable change management policies. Unlike New

[22] Ham Aff. ¶ 311 (emphasis added).

[23] SWBT E-mail to AT&T, 9/28/99 (EDI availability time change) (Attachment 5).

[24] Bell Atlantic-New York Order, ¶¶ 114, 118.

York, the Texas PUC has not adopted any performance metrics to assess SWBT's performance in meeting its change management obligations with respect to CLECs. Even so, it does not take a very finely calibrated instrument to detect that SWBT's overall performance in this area has been exceptionally poor. In fact, SWBT has routinely exposed CLECs and their customers to the risk of major systems problems, and it has demonstrated its indifference to the consequences by proceeding with "flash cuts" at times when SWBT was well aware that serious problems remained unresolved.

56. While SBC has very recently published a new Change Management Policy ("CMP") which covers a 5-state area, including Texas,[25] SWBT has not yet demonstrated that it is able to comply with that new CMP, nor should that be taken for granted in light of past experience.[26] SWBT's prior attempts to implement new releases under less stringent CMP requirements have been extremely unsuccessful. The problems afflicting all of SWBT's EDI releases in 1999 show that SWBT has yet to implement a new EDI release in accordance with established procedures.

1. The May 1, 1999 Release.

57. Smooth implementation of SWBT's May 1 EDI/LSR Release was particularly important to AT&T because it was rolled out in the middle of AT&T's service readiness testing

[25] Accessible Letter, CLEC 99-130, September 28, 1999, Ham Aff. Att. NN.

[26] This new policy was the culmination of more than a year of effort by Texas CLECs to persuade SWBT to provide certain key safeguards which are essential in an environment in which there is no versioning and SWBT is constantly modifying its OSS. Among the issues that AT&T and other Texas CLECs have fought for are (1) the need for joint "go/no go" determinations before releases are put into production; (2) minimum test periods; (3) documentation of entrance, exit and success criteria for testing; and (4) SWBT's commitment to extend test periods and to fix errors found in testing. See, e.g., TPUC Project 19000, Letter, AT&T to TPUC (6/21/99) (Attachment 6).

for UNE-P. Under the written EDI/LSR Change Control Process guidelines in effect at the time, the testing of a new release was supposed to begin approximately 60 days after the circulation of final requirements by SWBT and at least 30 days prior to the release implementation date. Unless otherwise mutually agreed to by the parties, SWBT's published change control process time line generally called for 30 days of testing, and permitted CLECs to request a delay in implementation if testing was not successfully completed within the planned time frame.[27]

58. Despite these guidelines, and despite a specific request by AT&T for SWBT to allow an adequate time frame for pre-release joint testing, SWBT declined to commit to more than 5 days of joint testing, ending the day prior to release implementation.

59. Upon receipt of the release on April 26, 1999 (five days prior to the May 1 release implementation date), AT&T attempted to execute 17 test order scenarios to evaluate the new SWBT requirements. Despite multiple attempts to execute its test cases during the first 4 days of testing -- and despite SWBT's repeated assurances that the errors preventing successful transmission of those test cases were being resolved -- the test period ended with only one of 17 scenarios having completed. Moreover, at least some of the errors AT&T encountered were in areas that were not expected to be impacted by the release, thus suggesting that the release, as coded, was generating problems upstream and downstream from the areas supposed to be affected.

60. On the fourth day of testing, AT&T requested that SWBT delay implementation of the release so that SWBT and AT&T could jointly resolve the issues that had

[27] SWBT EDI/LSR Change Control Process, Accessible Letter CLECSS 98-040, 6/15/98 (SWBT Appendix G, Vol. 3, Tab 147.) There is a conflict in this document between a 30-day testing period provided for in the time line and a reference elsewhere to "three weeks" of pre-release testing.

arisen and complete testing to ensure that the defects had been eliminated. SWBT refused to delay implementation, and assured AT&T that all defects had been eliminated; however, the next day SWBT disclosed that it could not delay the May 1 Release, because it had already begun coding the release into its production systems -- a day ahead of scheduled implementation. Again, SWBT assured AT&T that all defects had been cleared.

61. Contrary to SWBT's repeated assurances, AT&T continued to encounter the same record exchange problems after the release was implemented as it had encountered during the limited testing period.[28] Moreover, AT&T also experienced new and unexpected problems that had not surfaced during testing, and which showed that SWBT -- contrary to good practice -- had not engaged in adequate internal regression testing (i.e., testing to identify unanticipated impacts from software changes) with respect to the May 1 Release.[29] SWBT subsequently acknowledged that this was the case.[30] Ultimately, relief from all of the problems created in the May 1 Release did not become available until SWBT introduced its August 14, 1999 Release, more than two and a half months later.

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[28] Among the problems encountered were the incorrect population of key information (circuit identification numbers and reference numbers) on electronically generated FOCs and SOCs. Because AT&T relies on this information to assist it in future work on a given account (e.g., maintenance work), incorrect data will cause such future work to fail.

[29] Among other things, electronic FOC and reject return appeared to be impaired, resulting in AT&T receiving manual (i.e., fax) returns of FOCs and rejects. Moreover, in many cases, circuit identification information was missing completely.

[30] The minutes of the first Change Management Process Meeting following the May 1 Release reflect that "AT&T expressed its concern that the SWBT side of the interface be clear of defects prior to beginning CLEC testing. CLECs should not be identifying problems on the SWBT side of the interface, but rather testing for problems on the CLEC side of the interface. SWBT agreed with AT&T and stated it would try to complete its testing prior to the CLECs testing window." CLEC99-070, 5/25/99, Final Minutes – May 11, 1999 Change Management Process Meeting, p. 3. (SWBT Appendix G, Vol. 8, Tab 549.)

62. If AT&T had been in production at the time of the May 1 Release, it would have been required to suspend the generation of orders for new lines and migrations. With the May 1 Release, SWBT generated inaccurate circuit IDs ("ECCKT") in its EDI response transactions. SWBT requires that, on any subsequent order activity for a given customer, the ECCKT be provided. AT&T's systems are designed to store the ECCKT received from SWBT in connection with the initial EDI transaction, so that the ECCKT can be provided back to SWBT when changes are made to a customer's account. Thus, if the ECCKT is contaminated, any change orders submitted by AT&T to, for example, change the customer's features, would be rejected. If AT&T were to have experienced this issue in production in the month of August for example, XXXX lines would have received contaminated data; in September the volume impacted would have been XXXXX lines.

2. The August 14, 1999 Release.

63. Despite the problems experienced in the May 1, 1999 EDI Release as a result of SWBT's unilateral decision to truncate the testing period, SWBT also attempted to reduce the joint testing interval for its next release -- the August 14, 1999 EDI Release -- to no more than 5 days. Only after CLECs, including AT&T, approached the Texas PUC requesting emergency interim relief did SWBT reluctantly agree to set a 14-day test window[31] -- again falling far short of the 30-day test period provided for in the CMP.[32]

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[31] AT&T Request for Expedited Order, PUC Project 19000, 5/20/99 (Attachment 7).

[32] SWBT EDI/LSR Change Control Process, Accessible Letter CLECSS 98-040, 6/15/98 (SWBT Appendix G, Vol. 3, Tab 147.) Telcordia found that SWBT's 14-day test period was not set in a manner consistent with documented procedure. Telcordia, The Public Utility Commission of Texas, Southwestern Bell Change Control Process Validation Report ("Telcordia 8/14/99 CMP Report"). (Attachment 8).

64. Although the August 14 Release did not introduce significant new functionality (other than delivering fixes to the inbound-outbound electronic message problems left over from SWBT's flawed implementation of the May 1 EDI Release),[33] SWBT was nonetheless forced to issue a "Correction to Requirements" only three days before the scheduled start of joint testing.[34] This last minute "churn" in the Final Requirements for the August release was reminiscent of similar experiences with other SWBT releases.

65. The Texas PUC requested Telcordia "validate whether SWBT followed the SWBT Change Control Process in connection with the 8/14/99 EDI/LSR Release and the effectiveness of that process as to that release".[35] Telcordia observed many of the same problems that we have noted above, and that, in the context of more significant releases, caused serious consequences.

66. Thus, among other things, Telcordia criticized SWBT for providing only a 14-day testing window; found that SWBT failed to give CLECs the prescribed time in which to respond to CMP notices; and determined that SWBT failed to properly document defects discovered during testing or to conduct root cause analysis with respect to those defects.[36] In the

[33] SWBT represented that the August 14 Release "was a much smaller release than the 5/1 release. Final requirements contain only 11 edits." CLEC99-070, Final Minutes – 5/11/99 Change Management Process Meeting, filed 5/25/99, at p. 4. (SWBT Appendix G, Vol. 8, Tab 549.)

[34] Telcordia 8/14/99 CMP Report at 9. (Attachment 8.)

[35] Id. at 4. Because the Telcordia review was limited to the extremely minor August 14 Release, Telcordia's high level conclusions that "SWBT generally followed its Change Control Process" and that various "inconsistencies" noted by Telcordia did not -- in the context of that very simple release -- "undermine achievement of its general intent", are less important than its finding that SWBT had not complied with its own CMP.

[36] Telcordia 8/14/99 CMP Report at 5, 13-18 (Attachment 8). This impact "rating" can only be explained as a comment on the insignificant scope of the August release.

face of SWBT's similar problems in the December 19 and May 1 releases and their serious consequences for those releases, Telcordia nonetheless concluded that the potential impact of these problems is "minor".[37]

67. Telcordia also found that -- contrary to SWBT's CMP -- no test plan was provided to CLECs with the final requirements for the new release; there was no documented evidence of CLEC agreement to the number of test cases; there was no evidence that ten prescribed "test-related tasks" were "formally considered and assigned due dates"; and there was no evidence that testing "entrance criteria" or "exit criteria" were defined or achieved.[38] These problems were conceded by Telcordia to be "major."[39]

3. The October 23, 1999 Release.

68. Because open issues remained following Telcordia's review of SWBT's August 14 Release, Telcordia was again requested by the Texas PUC to validate whether SWBT followed its CMP in connection with SWBT's October 23, 1999 release, which was also minor in scope.[40] Despite Telcordia's high level conclusion to the contrary,[41] the facts reported by Telcordia show that SWBT has a continuing inability to adhere to its CMP.

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[37] Id.

[38] Id. at 14-15.

[39] Id. at 15. Telcordia also documented "CLEC concerns" about SWBT's CMP. Among other things, CLECs complained that "SWBT final requirements are not truly 'final'"; "test intervals are too short"; "CLECs are encountering errors that should have been resolved in SWBT regression testing"; and "CLECs did not have a documented way to delay a release". Id. at 21-22.

[40] The Public Utility Commission of Texas, Supplemental Assessment of the Southwestern Bell Change Management Process ("Telcordia 10/23/99 CMP Report") at ES-1. (SWBT Appendix D, Vol. 9, Tab 98 (12/13/99). SWBT acknowledges that a number of "dates and timeframes" pertaining to the October 23 release "had already passed" when SWBT's new CMP became effective, and that the new

69. For example, as the Telcordia Report shows, SWBT first issued its "Final Requirements" for the new release on June 23, 1999. Thereafter, the "Final Requirements" were "updated", "clarified" or "supplemented" on July 9, August 6, August 13, September 7, September 13, October 6, and October 21.[42] Indeed, the October 21 "update" (adding a new error message) took place just two days before the Release was implemented, and three days after the completion of CLEC testing, thereby invalidating CLEC test results.[43] While Telcordia sought to minimize these changes as "clarifications" and "minor enhancements," it nevertheless acknowledged that eleventh hour changes to "Final Requirements" make it "more difficult . . . for a CLEC to prepare for the implementation of the new release" and "increase the risk of introducing bugs into the release".[44] Accordingly, SWBT's October 23, 1999 Release was not

CMP, therefore, did not fully apply. (Ham Aff. ¶ 314.) Some of the limitations of the October 23 Release are described in the Telcordia 10/23/99 CMP Report at pages 6, n.2.

[41] Telcordia stated that SWBT "generally followed its CMP" and that the problems observed "did not undermine achievement of its general intent." Telcordia 10/23/99 CMP Report at ES-1.

[42] Id. at 9.

[43] Id. at 3. SWBT concedes that "[s]everal changes to the final requirements occurred late in the process"; and that it had "valid reasons" for "updating" the "Final Requirements". (Id. ¶ 316.) That may be, but all that means is that SWBT published its "Final Requirements" prematurely.

[44] Id. at 10. Telcordia suggests that SWBT would have correctly followed the "exception" process provided for in the CMP if it had properly designated its Accessible Letters as "Release Requirements Exception Accessible Letters". (Id. at 9) However, it is hard to classify each of eight post-"Final" changes as "exceptions". It would be more accurate (especially in light of SWBT's prior history) to characterize them as the "rule". Indeed, even SBC has acknowledged that "this is not the way SBC wants to do business and that steps are being taken to improve in this area". Accessible Letter CLEC 99-170, Final Minutes for 10/12/99 CMP Meeting, 11/12/99 (Attachment 9).

handled any better than any of SWBT's other releases.[45]

4. Impact of Major Releases

70. Despite the fact that SWBT's 1999 releases were relatively minor, both of them suffered from serious deficiencies. And, the problems experienced in connection with these releases pale in comparison to those encountered in connection with SWBT's last major release which was implemented in December 1998.

71. Prior to that release, SWBT announced the scheduled changes in a series of "Accessible Letters." Less than a week before the scheduled release date, SWBT circulated a new version of its Local Service Ordering requirements ("LSOR"), which should have incorporated all changes previously announced in the Accessible Letters. However, not only did the LSOR differ from the Accessible Letters, but some of the changes made by SWBT were not revealed in either the LSOR or the Accessible Letters. These changes were so significant that [all] of the pre-release time spent planning, coding and developing was wasted. For example:

- In excess of 30 requirements were implemented by SWBT but never announced via the Accessible Letter Process; thus, CLEC's systems development and methods and procedures development did not anticipate the changes.

- In excess of 14 requirements were incorrectly published through the Accessible Letter process, and as a result, CLECs erroneously coded to incorrectly documented requirements.

[45] While Telcordia asserts that "four out of the five CLECs interviewed agreed that SWBT generally followed the CMP for the 10/23/99 Release", it is clear from two charts reflecting "CLEC Perception of Weakness" and "CLEC Suggestion for Improvement" that all of SWBT's old problems remain, including "[t]oo many . . . interface requirements changes too late in the process"; "CLEC test time getting cut into by requirements changes"; "[c]hanges appear to have been introduced without any documentation"; "testing window was reduced because SWBT was not prepared to start testing"; and so on. Telcordia 10/23/99 CMP Report at p. 11-15.

72. SWBT's inability to implement the December 1998 release without substantial and lingering difficulties is particularly significant because of its timing. The December 1998 EDI release was being planned and implemented at a time when SWBT's motivation to follow proper change management processes and to introduce a flawless upgrade could not have been higher. The release was essential to respond to the TPUC's post-271 hearing finding that SWBT's system development and its technical requirements documentation were out of synch. Moreover, Telcordia's OSS testing process could not begin until the December release was implemented. Despite the powerful incentives to plan and execute with precision, SWBT's pre-release announcements and the release implementation were both flawed. SWBT took more than 90 days to rectify the development related problems associated with the December release. Without the incentives created by the TPUC findings of recommendation and Telcordia testing presented, CLECs have even less assurance that future releases will be implemented correctly.

73. Until SWBT demonstrates -- in the context of a significant EDI release -- that it has overcome these recurring problems, CLECs relying on EDI to provide mass market local service are seriously at risk, especially in light of SWBT's failure to provide versioning. Now that AT&T has entered the residential market via UNE-P and will enter next month with its cable telephony offer – both using an EDI, interface, the consequences of SWBT's flawed implementation of software changes are magnified. Another unsuccessful "flash cut" could interfere with AT&T's ability to service existing customers and create the impression that AT&T is incapable of providing consistent, reliable service.

D. SWBT Has Failed to Provide an Adequate Test Environment.

74. In its recent Bell Atlantic Order, the Commission found that CLECs "need access to a stable testing environment to certify that their OSS will be capable of interacting smoothly and effectively with the BOC's OSS" as it may be modified as a result of systems changes.[46] Thus, "prior to issuing a new software release or upgrade, the BOC must provide a testing environment that mirrors the production environment" so that CLECs can test the new release.[47] Without such a "mirror-image" environment, there is a risk that CLECs -- after implementation of a new release -- "may be unable to process orders accurately and unable to provision new customer services without delays".[48]

75. The Commission found that Bell Atlantic met these requirements based, among other things, on (1) the use of its test environment in connection with an actual release, and (2) KPMG's finding -- after substantial testing -- that Bell Atlantic's test environment (or an interim version of it) "adequately mirrored the production environment".[49] Neither of those circumstances exists here.

76. First, AT&T's efforts to use SWBT's test environment in conjunction with past releases demonstrate that SWBT's test environment does not "mirror" its own production environment. For example, during AT&T's testing in preparation for SWBT's December 19, 1998 release, all of AT&T's initial test orders were rejected because SWBT had failed to

[46] Bell Atlantic-New York Order ¶ 109. See also Letter, Lawrence E. Stricking, Chief, Common Carrier Bureau to Nancy E. Lubamersky, 9/27/99, at 3 (Attachment 10.)

[47] Id.

[48] Id.

replicate in its test environment certain changes that had been made in its production environment.[50] As a result, the testing had to be suspended, and ultimately AT&T was only able to complete the testing for the December 19 Release by agreeing -- under protest -- to proceed with testing in SWBT's production environment.[51] This would not have been a viable option if AT&T had been in production at the time.[52]

77. SWBT's test environment is also unacceptable because LSRs do not "flow through" the test environment. Unlike SWBT's production environment -- where LSRs are supposed to flow through electronically from SWBT's LASR editing system, to its mechanized order generating (MOG) system, and on to its SORD system for order distribution -- LSRs are literally hand carried in its test environment, e.g., from LASR to MOG, and from MOG to

[49] Id. ¶¶ 119-22.

[50] Specifically, SWBT had made certain changes in its production environment with respect to the population of the "BAN" (Billing Assignment Number) field (an LSOR field communicating billing identification), but had failed to make corresponding changes in its test environment.

[51] AT&T wrote to SWBT at the time, requesting "that all SWBT systems be capable of testing all edits in their associated test systems" and stating: "[W]e expect that all systems and data in the test environment exactly mirror the production systems and orders will be tested all the way through SORD." AT&T Letter to SWBT, 1/15/99 (Attachment 11).

[52] As a practical matter, it is impossible for a CLEC to test a new release in SWBT's production environment, because such testing can have unexpected repercussions which can impair its ability to remain in production. As KPMG stated, in its 12/7/98 "Impact Assessment" with respect to problems which then afflicted Bell Atlantic's test environment:

> "The lack of a stable test bed for carrier-to-carrier testing of EDI ordering and pre-ordering inhibits CLECs from effectively conducting their pre-production testing. It is expected that many CLECs would not go forward with implementation of an EDI interface to Bell Atlantic's OSS systems without the capability to conduct thorough, rigorous tests of end-to-end EDI functionality under simulated production conditions."

KPMG Exceptions 21, Impact Assessment at 1.

SORD.[53] This has two impacts: first, SWBT's test environment cannot test either new flow-through capability or the impact of new releases and other changes on flow-through on SWBT's side of the EDI gateway; second, SWBT manually monitors the progress of individual test cases at breakpoints in the test environment, which not only introduces delays in the return of order status notices, but also deprives CLECs of valid data on how relevant systems will actually respond in production when the new release is implemented.[54]

78. Unlike KPMG, Telcordia did not test SWBT's test environment. Telcordia did, however, note that SWBT's CMP "does not include detailed information on test case setup, operation or use of the EDI/LSR release test environment" and stated that "CLECs, particularly new CLECs, need detailed information on the operation and use of the test environment".[55]

79. On November 5, 1999, SWBT announced the introduction of a new test environment, which it claims provides the same capabilities as the production environment with respect to flow through and order status notices.[56] SWBT's claims of enhanced capabilities in its new test environment are overblown. Indeed, SWBT representatives advised AT&T on

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[53] SWBT's LSR process flow is more fully described in Section IV, B.1 below.

[54] Ultimately, SWBT's test environment must serve both those CLECs which are developing OSS capability and those which are already in production. For purposes of allowing CLECs to verify their interpretation of the mapping specifications and system requirements needed to pass successful orders, complete electronic flow through at SBC's end of the test interface may not be essential. However, to support joint testing of releases, a robust test environment must incorporate the same stages and levels of electronic flow as will exist in the production environment.

[55] Telcordia 8/14/99 CMP Report at 19. Although SWBT states that the Texas PUC has arranged for Telcordia to "validate SWBT's new test environment", it is unclear when that will be accomplished. It only appears that "SWBT has agreed to work with the TPUC and Telcordia to develop appropriate time frames for this work to be accomplished." Ham Aff. ¶ 344.

[56] SWBT Accessible Letter CLEC SS99-150 (11/5/99) (SWBT Appendix G, Vol. 12, Tab 831.)

December 13, 1999 that: (1) the "new" test environment has the "exact same capabilities" as the old one, the only difference being that CLECs no longer share the environment with SBC developers; (2) that SWBT's statements about enhanced flow-through capability as described in SWBT's Accessible Letter, are misleading, and that to expand flow-through capabilities in testing would add time to problem resolution efforts in the testing process; and (3) no changes are currently planned to add new capabilities to SWBT's test environment.

80. In short, it is at best unknown whether SWBT's newly announced test environment will allow robust testing in an environment which – as the Commission has required -- truly mirrors SWBT's production environment.

E. SWBT Has Failed to Publish Adequate EDI Interface Documentation.

81. It has long been clear that BOCs have an obligation -- as part of their duty to provide adequate assistance to CLECs seeking to access and use their OSS functions -- "to provide competing carriers with specifications necessary to instruct competing carriers on how to modify or design their systems in a manner that will enable them to communicate with the BOC's legacy systems and any interfaces utilized by the BOC for such access."[57] In its recent decision on Bell Atlantic's New York application, the Commission approved the approach -- adopted by KPMG in its testing of Bell Atlantic's OSS -- of seeking to confirm that a BOC has met its interface documentation obligations by assuming the posture of a "pseudo-CLEC"[58] – i.e., testing the adequacy of such documentation by actually building an interface with it, and,

[57] Ameritech-Michigan Order ¶ 137.

[58] Bell Atlantic-New York Order ¶ 96.

more generally, assessing the "ease or complexity of developing interface software" using the BOC's documentation.[59]

82. Unlike Bell Atlantic, SWBT has failed to publish accurate and comprehensive, SWBT-specific EDI interface documentation. While Bell Atlantic (and other BOCs) publish customized EDI specifications, SWBT does not. Instead, it relies on a series of Accessible Letters to communicate deviations between its EDI interface development and industry standards. As a result of the lack of custom EDI documentation, AT&T was forced to spend several years developing its side of the EDI through a process of testing and re-testing with SWBT, with each side retuning and fine tuning along the way – a process that would have been substantially less protracted and less costly if supported by a stable set of documentation matching SWBT's own EDI interface development. Instead, specifications were mapped out on a trial and error basis destined to add significantly to a CLEC's development timeline. Indeed, a significant portion of the estimated $50 million that AT&T spent on its EDI development was attributable to this trial and error process.

83. Effective October 1, 1999, SWBT lists on its CLEC website a series of Accessible Letters that describe some differences between industry standard EDI interface specifications and those peculiar to SWBT. The collection of Accessible Letters – even for

[59] Id. ¶ 10 & n.14.

CLECs who go through the arduous and uncertain process of piecing them all together – do not offer a comprehensive view of all differences between industry standard interface guidelines and those consistent with SWBT's EDI interface. In particular, SWBT's deviations from industry standards relating to order status notification (e.g. FOCs, SOCs, rejects, and jeopardy notices) mapping specifications are not captured in Accessible Letters. Therefore, a CLEC attempting to build an EDI gateway still runs the unacceptable risk of performing costly development work in compliance with available mapping documentation but out of compliance with SWBT - specific system specifications.[60] Moreover, while AT&T has been able to develop its EDI capability despite SWBT's failure to live up to its obligation to document its requirements, the status quo is threatened every time SWBT makes a change. As demonstrated above, more often than not, requirements changes are not documented or are documented incorrectly. And as shown above, those very deviations have resulted in an enormous waste of resources.

84. Unlike KPMG in New York, Telcordia did not – despite AT&T's repeated urging -- adopt the posture of a "pseudo-CLEC" and attempt to build its own gateway relying solely on SWBT's EDI documentation. Instead, Telcordia purported to test SWBT's documentation "indirectly" through the use of the AT&T and MCI gateways in the test.[61] Thus,

[60] Because development work relating to receiving return messages from SWBT (e.g. rejects, status notifications) is linked to a CLEC's development of internal record management systems, any miscommunication as to SWBT's outbound transmission messaging specifications can have far-reaching impact.

[61] Telcordia Final OSS Readiness Report, 10/7/99, § 3.2.7 (SWBT Appendix D. Vol. 7, Tab 76). Telcordia acknowledged that "a single indirect documentation test period may not cover all the mismatches since the test was based on a 'snapshot in time'. . . ." Id.

the ability of a new CLEC seeking to use the information now available on the SWBT website to build an EDI interface that will interoperate effectively with SWBT's is at best an unproven theory. A test using AT&T's gateway, which had been fine-tuned through round after round of simulation testing and which is designed for AT&T's business plan, is scarcely equivalent to determining whether a "universal" CLEC could use available documentation to build a SWBT-compatible gateway supporting the broad array of order activities that a more competitive environment broad commercial will bring. [62]

85. Until SWBT publishes comprehensive SWBT-specific EDI interface information -- that CLECs can rely on without also having to rely on SWBT's goodwill to make it work -- its claim to have satisfied the requirements of Section 271 in this regard are premature.

IV. SWBT'S INTERFACES DO NOT OFFER NONDISCRIMINATORY ACCESS TO ITS OSS

A. Pre-Ordering

86. Pre-ordering generally refers to "those activities that a carrier undertakes with a customer to gather and confirm the information necessary to formulate an accurate order for that customer".[63] Such activities include, among other things, "(1) street address validation; (2) telephone number information; (3) service and feature availability information; (4) due date information; and (5) customer service record ("CSR") information." [64] The Commission has

[62] Telcordia's eleventh hour "documentation analysis – conducted in December 1999, long after the completion of the Texas OSS testing" proves nothing. There, Telcordia undertook primarily to determine if SWBT's EDI documentation is consistent with industry standards. Because SWBT has no custom EDI documentation, and instead points to the industry standard documentation, a study of consistency between EDI documentation and industry standards is meaningless.

[63] BellSouth-South Carolina Order ¶ 147. See also 47 C.F.R. § 51.5.

[64] BellSouth-Louisiana II Order ¶ 94.